

## **NOLANNE ARLETTE CHANG-WAI-LING**

NIH-Oxford Scholar and NSF Graduate Research Fellow, 2008

Degree: MBiochem, University of Oxford, 2008

Research Interests: Vascularization issues in tissue engineering contexts



Nollanne Chang graduated from the University of Oxford in 2008 with a Masters in Molecular and Cellular Biochemistry. Her interest in integrative research combining the fields of materials and biological sciences began during time spent as a research intern at Sandia National Laboratories in the Department of Surface and Interface Science under the supervision of Dr. Julia Hsu. Nollanne's investigation began with the lithographic printing of various sol-gel solutions for electronic applications and progressed to the production of novel zinc-oxide and polymer hybrid solar systems. These research endeavors allowed the discovery of innovative ways to use biological materials, such as synthetically assembled peptides, for the modification of inorganic materials. As a student in the Honors School of Molecular and Cellular Biochemistry at Oxford, Nollanne developed a collaborative dissertation research project between the Department of Materials and the Nuffield Department of Orthopaedic Surgery. Her joint supervisors, Dr. Jan Czernuszka (Materials) and Dr. James Triffitt (Orthopaedics), were very supportive, and she intends to continue the productive line of inquiry with them under the auspices of the NIH-Oxford program. With the additional involvement of Dr. Pamela Robey at the NIH-NIDCR, Nollanne expects to shed light on vascularization issues surrounding tissue engineering constructs and to develop a model system of bone regeneration *in vivo* which will stimulate endogenous cells to form all parts of normal tissue. Nollanne is an avid gardener and particularly interested in *Hemerocallis*, commonly known as the "daylily." Nollanne hybridizes her own daylilies, co-owns and manages an extensive daylily collection with her mother, is a life-time member of the American Hemerocallis Society as well as a certified senior exhibition judge. Having competed in cross-country events for eight years prior to university, Nollanne became both a rower and a coxswain at Oxford. She was vice-captain of the Somerville College Boat Club, achieved experienced coxswain status, and coxed numerous races. She also

competed as a rower in both intercollegiate and external events, and rowed in five bumps race sets, winning “blades” in one.